COLORADO
Department of Transportation

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Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

January 3, 2020

The Colorado Department of Transportation (CDOT) hereby submits its comments on the Public Notice for Proposed Rulemaking, "In the Matter of Use of the 5.850-5.925 GHz Band," released on December 17, 2019 to the Federal Communications Commission.

Safety is core to CDOT's mission and is paramount in every activity, project, and program in our department. Last year alone, over 36,000 people died on our nation's roadways. We constantly seek to leverage new ways to improve safety for all road users. Rapid technological innovations have armed state DOTs with new opportunities to introduce safety countermeasures for the traveling public, alongside other common-sense safety measures. These include increased investment in wider highway striping, rumble strips and enhanced public education around safe winter driving to complement new traction law requirements put in place by the Colorado legislature to improve safe mountain driving in the snow and ice. Pairing traditional safety tools with technological advancements such as connected vehicle (CV) technologies offer roadway operators great potential to radically improve the safety of our roadways by leveraging real-time information between the transportation system and roadway users.

The state of Colorado has embarked on deploying one of the largest and most robust connected vehicle environments on many of the state's most challenged roadways. Colorado's various CV deployments feature both dedicated short range communications (DSRC) and the cellular vehicle to everything (CV2X) protocols. This has been a deliberate step by the state of Colorado to utilize and leverage CV applications on our roadways while remaining poised and flexible as competing technologies play out in the market.

Significant elevations, tight curves, steep downgrades and changing weather conditions, all paired with ever growing congestion, require owner operators to continue to innovate on how we can maintain the highest level of safety on our roadways. CV technology offers a unique tool to gather and send vital safety information directly to our roadway infrastructure and users. Rich data such as crash notifications, airbag deployments, rapid slowdowns and queueing are just a few of the potential opportunities presented by deployment of CV technology. Real-time information allows roadway operators to respond faster when an incident occurs (when potentially seconds matter), as well as be proactive as roadway congestion begins to rise by lowering speeds or making other roadway decisions. Additionally, CDOT leverages CV technology for signal prioritization for emergency vehicles and efficiency of the system with signal and ramp timing.

The proposed rulemaking describes lack of widespread adoption of CV technologies as a reason to open the band to unlicensed devices. In Colorado, we have nearly 200 deployed devices that utilize DSRC or CV2X technologies. CV devices in Colorado will triple in the next three years, enabled largely by federal funding support by our partners at the United States Department of Transportation (USDOT), which awarded CDOT a $20 million discretionary BUILD grant to build out our CV environment.

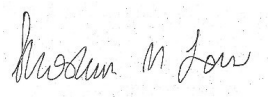
As an operator that is leveraging these technologies for safety benefits, the uncertainty of the dedication of airwaves to transportation safety is concerning. The proposal to allow unlicensed devices to operate in the adjacent bands raises concerns around the lack of information of how our CV data will be impacted by possible interference. Unlicensed use of the spectrum risks impacting the delivery of safety critical messages and as CV continues to grow, the volume, latency and reliability of the data being transmitted may be impacted.

The CV2X dedication is a welcome proposal, however, the effect this may have on existing DSRC deployments should be carefully considered. Transitioning of our existing DSRC assets to the proposed allocated bands will require significant effort, jeopardize our initial investment, and most importantly, halt the current safety improvements enabled by the CV data and infrastructure.

Given that much of the research features relatively small field tests, concerns arise on the lack of real world assessment of any of the proposed scenarios. As a demonstrated leader in this arena, we'd like to offer Colorado's real-world commercial grade infrastructure and supporting environment as a place for regulatory, private, public and academic testing and evaluation. We urge the FCC to coordinate with our partners at the USDOT on how we can leverage Colorado's existing deployment as a place for sound and thorough scientific testing to evaluate the various scenarios outlined in the proposed rulemaking as well as others brought forth during the comment period. Given our unique position as an early deployer of CV technology, we are eager to collaborate with others on experimental design and performance testing that can address current research and information gaps in use of the spectrum.

We are at a revolutionary point in the transportation industry. Today, technology is merging with the automobile in ways never thought imaginable, bringing forward innovative opportunities to state DOTs to capitalize on that advancement. That advancement offers lifesaving potential and supports our nation's mission to strive for zero deaths on our roadways. In Colorado, we have only begun to leverage that potential, and urge careful consideration as changes to the spectrum are proposed.

Best,



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